Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WALTER KOPP

Appeal No. 2000-0154
Application No. 08/942,954

ON BRIEF

Before FLEMING, RUGGIERO, and BARRY, *Administrative Patent Judges*.

BARRY, *Administrative Patent Judge*.

DECISION ON APPEAL

The examiner rejected the appellant's claims 21-36. He appeals therefrom under 35 U.S.C. § 134(a). We reverse.

BACKGROUND

The appellant's invention fixes "duplex" toner images, i.e., toner images printed on both sides of a paper. Conventional electrographic printers use a preheating saddle, a heated fixing drum, and a pressure roller to fix toner

images on a web or sheet of paper. When a paper already printed and fixed on one side is to be printed and fixed on the other, the paper must be passed over the hot surface of the preheating saddle for the second fixing. Unfortunately, the image that is already fixed is heated to such an extent that it softens and smears on the surface of the saddle. In contrast, the appellant's invention senses the temperature of at least one region of the sliding surface of a preheating saddle and controls the heating elements in the saddle according to a desired surface temperature. Such controlling prevents damage to the image that is already fixed while still being able to fix the second toner image during the second pass.

Claim 21, which is representative for present purposes, follows:

> 21. An electrographic printer thermal fixing system, comprising:
>
> a heat transfer fixing station for fixing a first toner image on a first side of a recording medium by direct heating thermal contact between the recording medium and at least one heating roller;

> a heat transfer fixing station for fixing a second toner image on a second side of the recording medium facing opposite the first side by direct heating thermal contact between the recording medium and at least one heating roller;
>
> a pre-heating saddle along a running direction of the recording medium for preheating the recording medium preceding the heat transfer fixing station which fixes the second image;
>
> said preheating saddle comprising a sliding surface for heating and supporting the recording medium over the entire first side at the contact region with the heating saddle;
>
> at least one temperature sensor for providing signals which are dependent on a temperature of said heating saddle at a region of said sliding surface;
>
> a plurality of heating elements arranged in said heating saddle below said sliding surface; and
>
> a heating control for controlling the temperature of said heating saddle according to a desired temperature, the heating control receiving signals from said temperature sensor and controlling heating of said heating elements.

(Appeal Br. at 25.)

The prior art applied by the examiner in rejecting the claims follows:

Naeser et al. (“Naeser”)	4,147,922	Apr. 3, 1979

Yaguchi 5,151,743 Sep. 29, 1992

Sugaya et al. (“Sugaya”) 5,179,417 Jan. 12, 1993.

Claims 21-23 and 25-36 stand rejected under 35 U.S.C. § 103(a) as obvious over Sugaya in view of Naeser. Claim 24 stands rejected under § 103(a) as obvious over Sugaya in view of Naeser further in view of Yaguchi.

OPINION

After considering the record, we are persuaded that the examiner erred in rejecting claims 21-36. Accordingly, we reverse.

Rather than reiterate the positions of the examiner or appellant *in toto*, we address their main point of contention. First, "relying on the description spanning col.l, line 13 though co1.2, line 38 and Fig.4,” (Examiner’s Answer, ¶ 11), the examiner asserts, “Sugaya et al. describes the convention [sic] use of a continuous web type duplex printing device

using a preheating saddle before each fixing device of each respective printer." (*Id.*) The appellant argues, "Sugaya teaches elimination of the second pre-heating saddle for dual printing,

. . Naeser . . . shows a pre-heating [sic] saddle in the context of a single printer." (Reply Br. at 2.)

In deciding obviousness, "[a]nalysis begins with a key legal question -- *what* is the invention *claimed*?" *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987). Here, independent claim 21 specifies in pertinent part the following limitations: "a heat transfer fixing station for fixing a first toner image on a first side of a recording medium by direct heating thermal contact between the recording medium and at least one heating roller; a heat transfer fixing station for fixing a second toner image on a second side of the recording medium facing opposite the first side by direct heating thermal contact between the recording medium and at least one heating roller; a pre-heating saddle along a running direction of the

recording medium for preheating the recording medium preceding the heat transfer fixing station which fixes the second image. . . ." Similarly, independent claim 32 specifies in pertinent part the following limitations: "fixing a first toner image on a first side of a recording medium by direct heating thermal contact between the recording medium and at least one heating roller of a heat transfer fixing station; fixing a second toner image on a second side of said recording medium opposite said first side by direct heating thermal contact between the recording medium and at least one heating roller of a heat transfer fixing station; providing a preheating saddle preceding the heat transfer fixing station which fixes the second image, said preheating saddle preceding the heat transfer fixing station for the second image in a running direction of the recording medium. . . .”

Also similarly, independent claim 33 specifies in pertinent part the following limitations: “a heat transfer fixing station for fixing a first toner image on a first side of a recording medium by direct heating thermal contact between a recording medium and at least one heating roller; a

heat transfer fixing station for fixing a second toner image on a second side of the recording medium facing opposite the first side by direct heating thermal contact between the recording medium and at least one heating roller; a pre-heating saddle along a running direction of the recording medium for preheating the recording medium preceding the heat transfer fixing station which fixes the second image. . . .” Further similarly, independent claim 35 specifies in pertinent part the following limitations: “fixing a first toner image on a first side of a recording medium by direct heating thermal contact between the recording medium and at least one heating roller of a heat transfer fixing station; fixing a second toner image on a second side of said recording medium opposite said first side by direct heating thermal contact between the recording medium and at least one heating roller of a heat transfer fixing station; providing a pre-heating saddle preceding the heat transfer fixing station which fixes the second image, said pre-heating saddle preceding the heat transfer fixing station for the second image in a running direction of the recording medium. . . .” Accordingly, the independent claims require *inter alia* fixing duplex toner

images on a recording medium wherein the medium is passed over the surface of a preheating saddle to heat the medium for a second fixing.

Having determined what subject matter is being claimed, the next inquiry is whether the subject matter is obvious. "'A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.'" *In re Bell*, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)). "Prior art references . . . must be read as a whole and consideration must be given where the references diverge and teach away from the claimed invention." *Akzo N.V. v. U.S. Intn'l Trade Comm'n*, 808 F.2d 1471, 1481, 1 USPQ2d 1241, 1246 (Fed. Cir. 1986) (citing W.L. *Gore & Assocs. v. Garlock*, 721 F.2d 1540, 1550, 220 USPQ 303, 311 (Fed. Cir. 1983)). "A reference may teach away by warning expressly that an element of a claimed invention 'should not, or cannot be used' with the prior art."

Lance Leonard Barry, *Teaching A Way Is Not Teaching Away*, 79 J. Pat. & Trademark Off. Soc'y 867, 870 (1997)(quoting *Para-Ordnance Mfg. v. SGS Importers Int'l.*,73 F.3d 1085, 1090, 37 USPQ2d 1237, 1241 (Fed. Cir 1995)).

Here, contrary to the examiner's assertion, Sugaya does not disclose a duplex printing device using a preheating saddle. To the contrary, the reference teaches that a preheating saddle cannot, or at least should not, be used in duplex printing. Specifically, if a preheating saddle is used to fix images during duplex printing, Sugaya warns that "malfunctions will arise which will undesirably degrade the quality of the printing operation." Col. 1, ll. 66-68. More specifically, "a portion of the developed toner images representing certain characters is not printed on the printing paper, col. 2, ll. 23-25; "a portion of the printed images is not visually recognized;" *id.* at ll. 34-35; and "the surfaces of the preheating plate and the back-up roll are undesirably contaminated with the molten toner." *Id.* at ll. 36-38.

Because Naeser discloses using a preheating saddle only for single-sided printing, col. 4, ll. 23-24 (“[t]he data carrier has toner images applied to one side thereof. . . .”), it cannot overcome Sugaya’s express teaching away. Relying on Yaguchi merely to teach “a film of PTFE,” (Examiner's Answer, ¶ 10), moreover, the examiner fails to allege, let alone show, that the tertiary reference overcomes the express teaching away.

Because Sugaya teaches away expressly from using a preheating saddle in duplex printing, we are not persuaded that the teachings from the applied prior art would have suggested the limitations of "a heat transfer fixing station for fixing a first toner image on a first side of a recording medium by direct heating thermal contact between the recording medium and at least one heating roller; a heat transfer fixing station for fixing a second toner image on a second side of the recording medium facing opposite the first side by direct heating thermal contact between the recording medium and at least one heating roller; a pre-heating saddle along a running direction of the recording medium for preheating the recording

medium preceding the heat transfer fixing station which fixes the second image;" "fixing a first toner image on a first side of a recording medium by direct heating thermal contact between the recording medium and at least one heating roller of a heat transfer fixing station; fixing a second toner image on a second side of said recording medium opposite said first side by direct heating thermal contact between the recording medium and at least one heating roller of a heat transfer fixing station; providing a preheating saddle preceding the heat transfer fixing station which fixes the second image, said preheating saddle preceding the heat transfer fixing station for the second image in a running direction of the recording medium;" "a heat transfer fixing station for fixing a first toner image on a first side of a recording medium by direct heating thermal contact between a recording medium and at least one heating roller; a heat transfer fixing station for fixing a second toner image on a second side of the recording medium facing opposite the first side by direct heating thermal contact between the recording medium and at least one heating roller; a pre-heating saddle along a running direction of the recording medium for preheating the recording

medium preceding the heat transfer fixing station which fixes the second image;" and "fixing a first toner image on a first side of a recording medium by direct heating thermal contact between the recording medium and at least one heating roller of a heat transfer fixing station; fixing a second toner image on a second side of said recording medium opposite said first side by direct heating thermal contact between the recording medium and at least one heating roller of a heat transfer fixing station; providing a pre-heating saddle preceding the heat transfer fixing station which fixes the second image, said pre-heating saddle preceding the heat transfer fixing station for the second image in a running direction of the recording medium. . . ." Therefore, we reverse the rejection of rejection of independent claims 21, 32, 33, and 35. We also reverse the rejection of claims 22-31, claim 34, and claim 36, which respectively depend from claims 21, 33, and 35.

CONCLUSION

In summary, the rejection of claims 21-36 under § 103(a) is reversed.

REVERSED

MICHAEL R. FLEMING)
Administrative Patent Judge)
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	)	BOARD OF PATENT
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LANCE LEONARD BARRY	)	
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